



GPC Light Shaper

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Publication date:
2015

Document Version
Publisher's PDF, also known as Version of record

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Citation (APA):
Bañas, A. R., Raaby, P., & Glückstad, J. (2015). *GPC Light Shaper*. Poster session presented at Medico Bazar 2015, Lyngby, Denmark.

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GPC Light Shaper

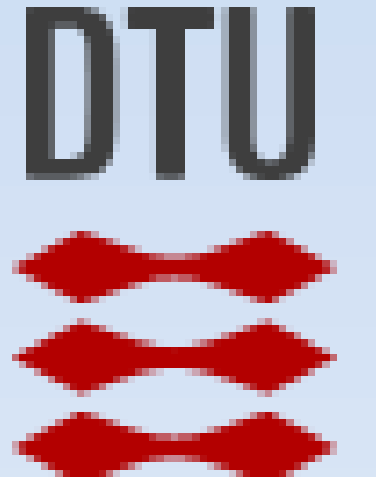
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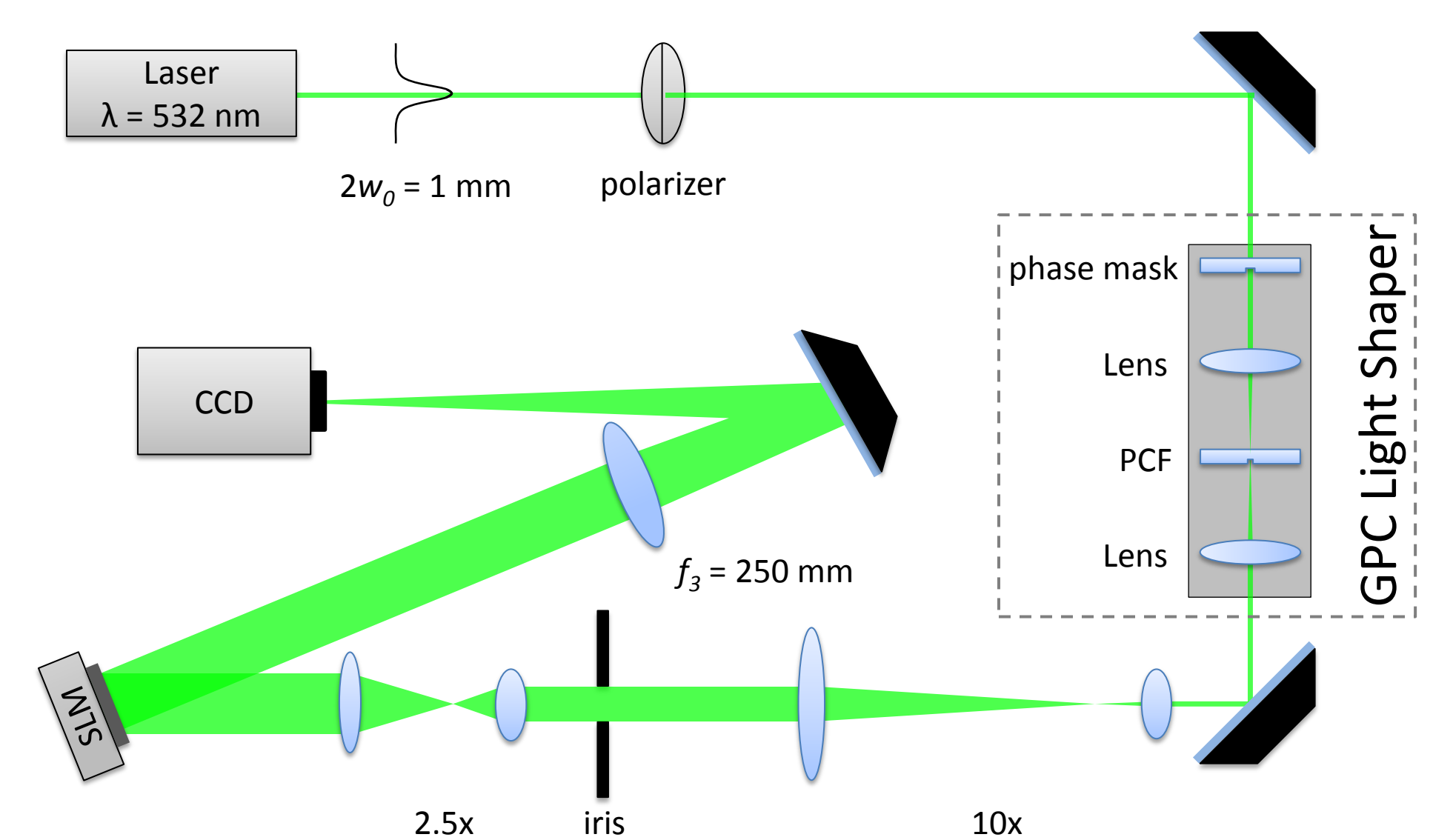
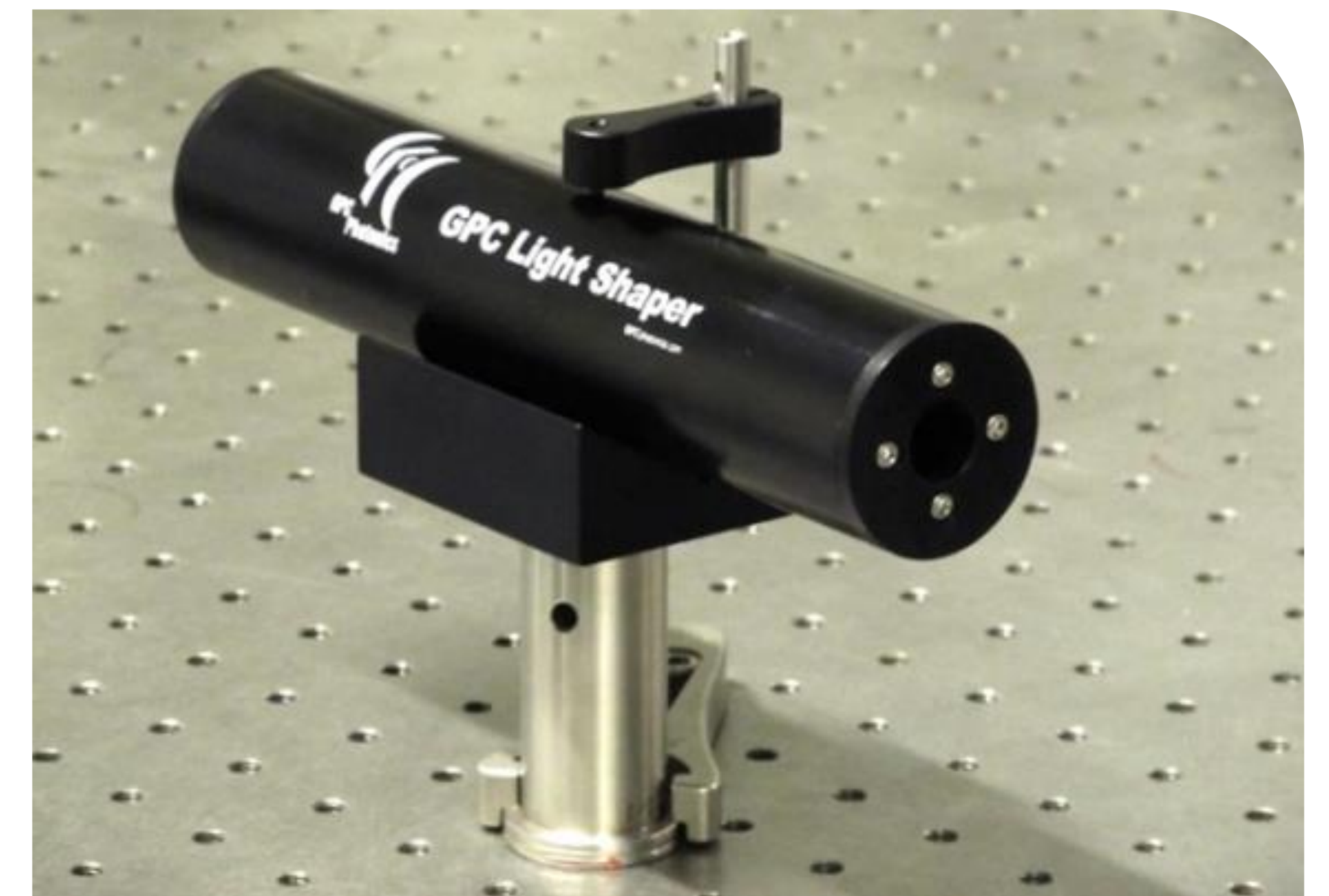
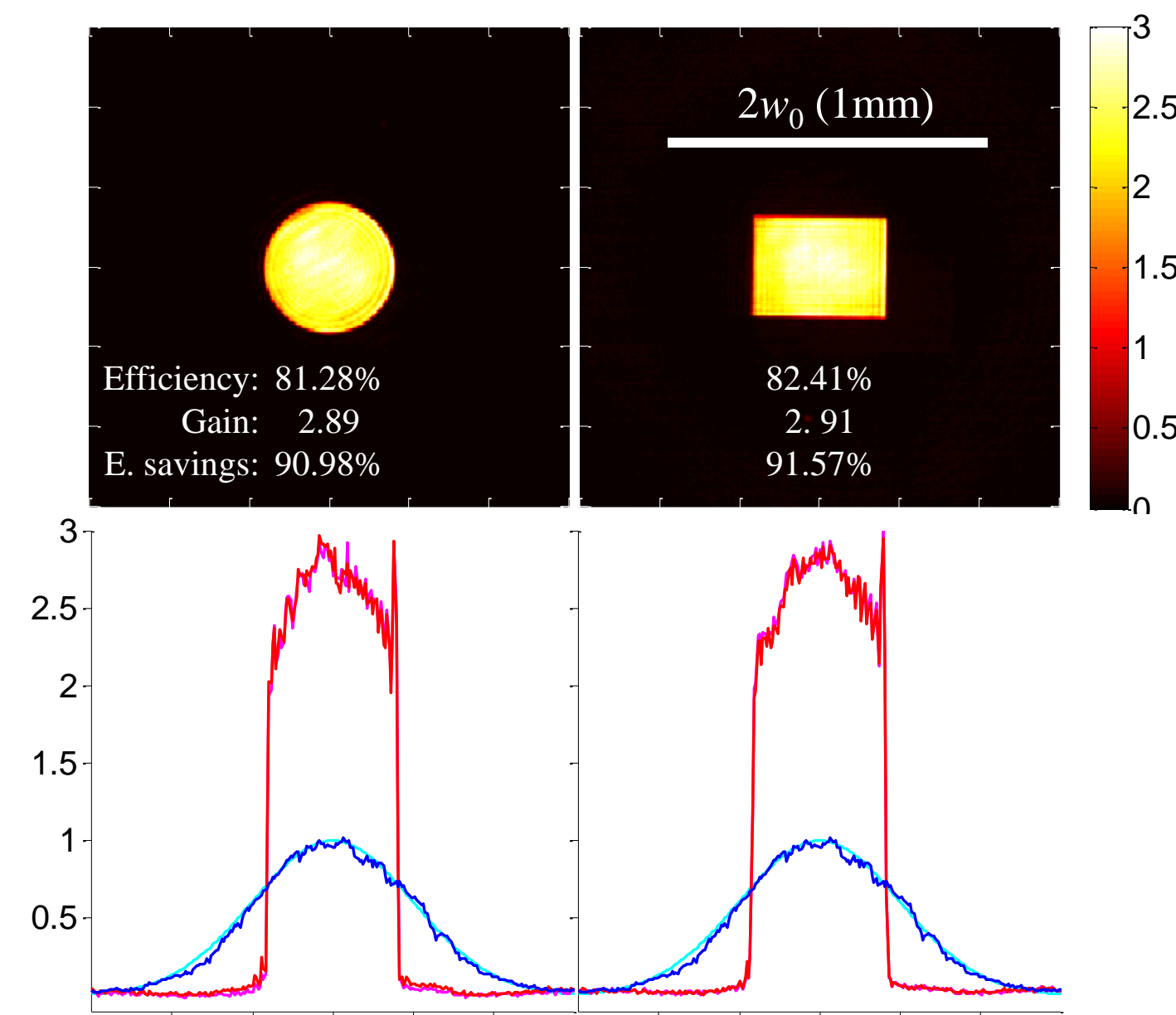
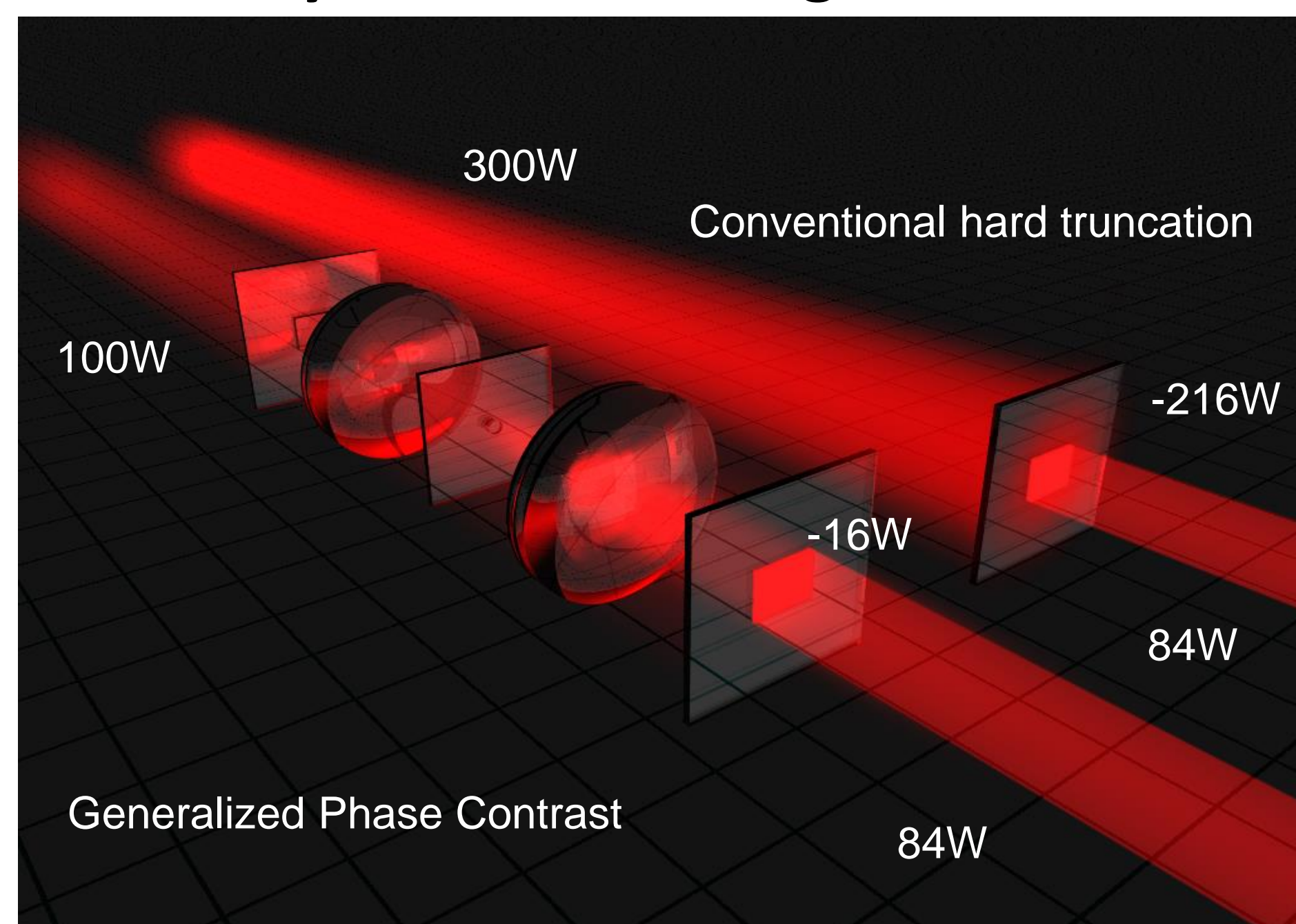
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www.ppo.dk, www.GPCphotonics.com



Generalized Phase Contrast is a disruptive light sculpting technology for studying brain functionalities via light-activated neuron control. GPC dynamically reshapes conventional or multi-wavelength lasers for precise and efficient neuron targeting. GPC also makes existing laser systems much more efficient through intelligent laser illumination.

Efficiently illuminate using a static GPC LS

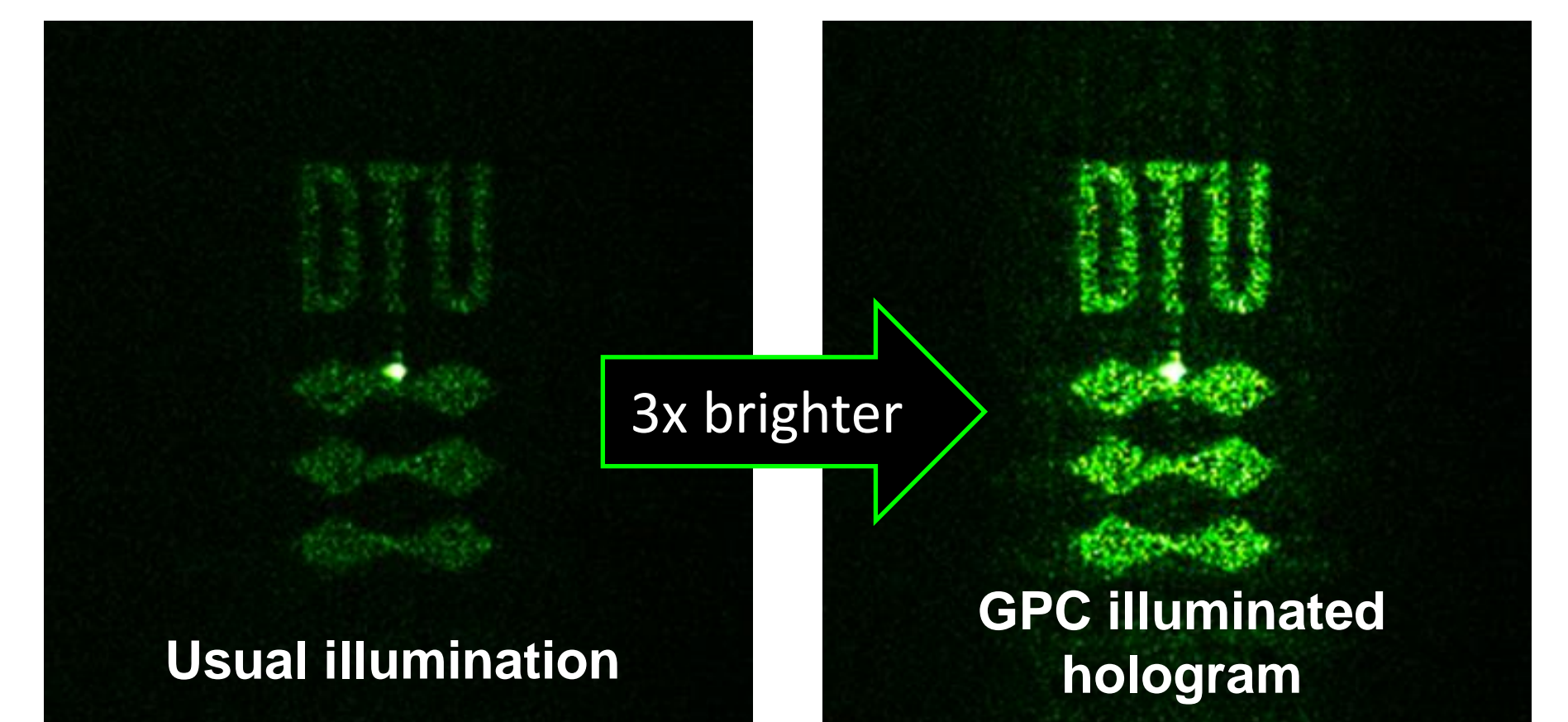
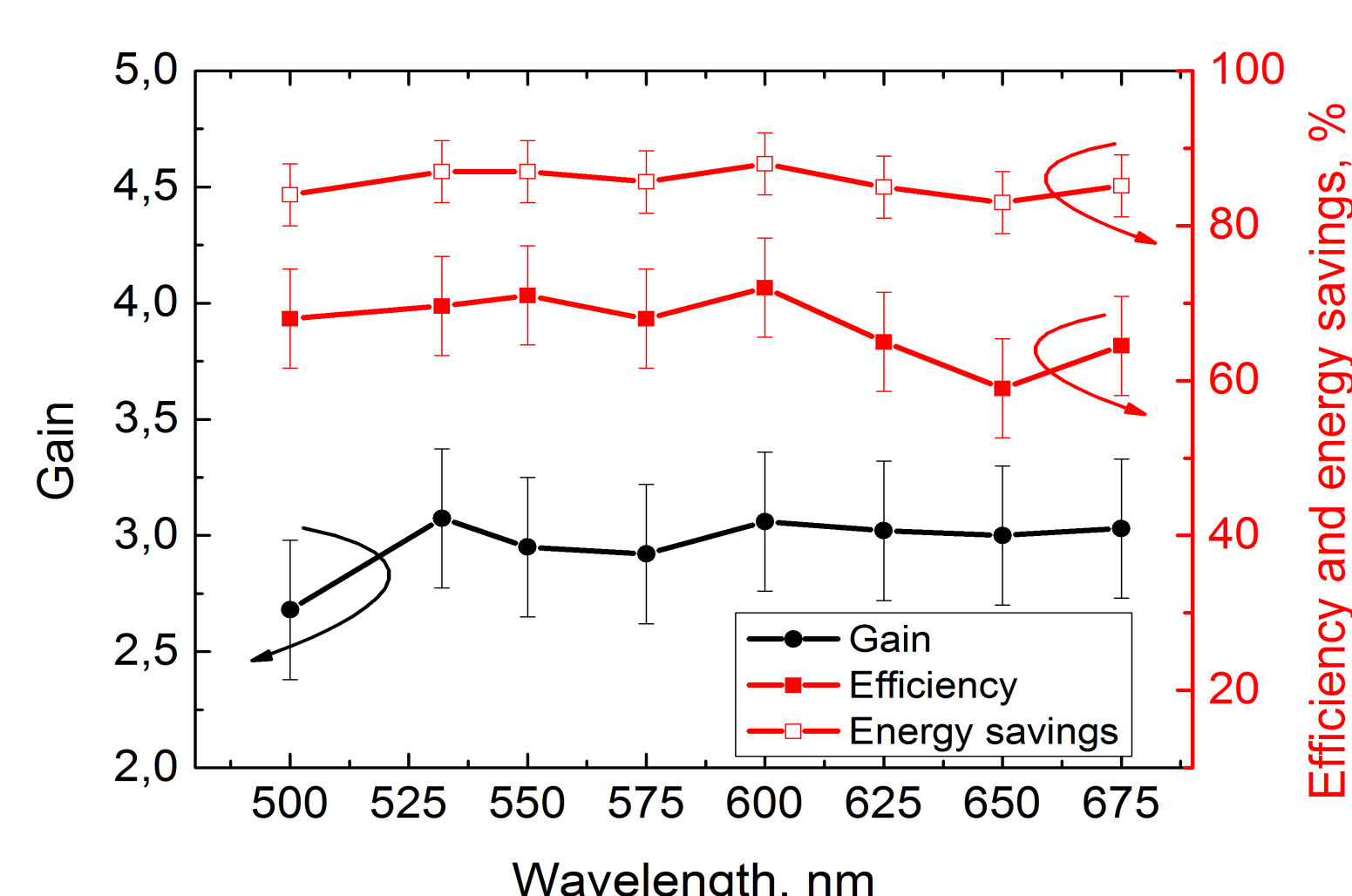
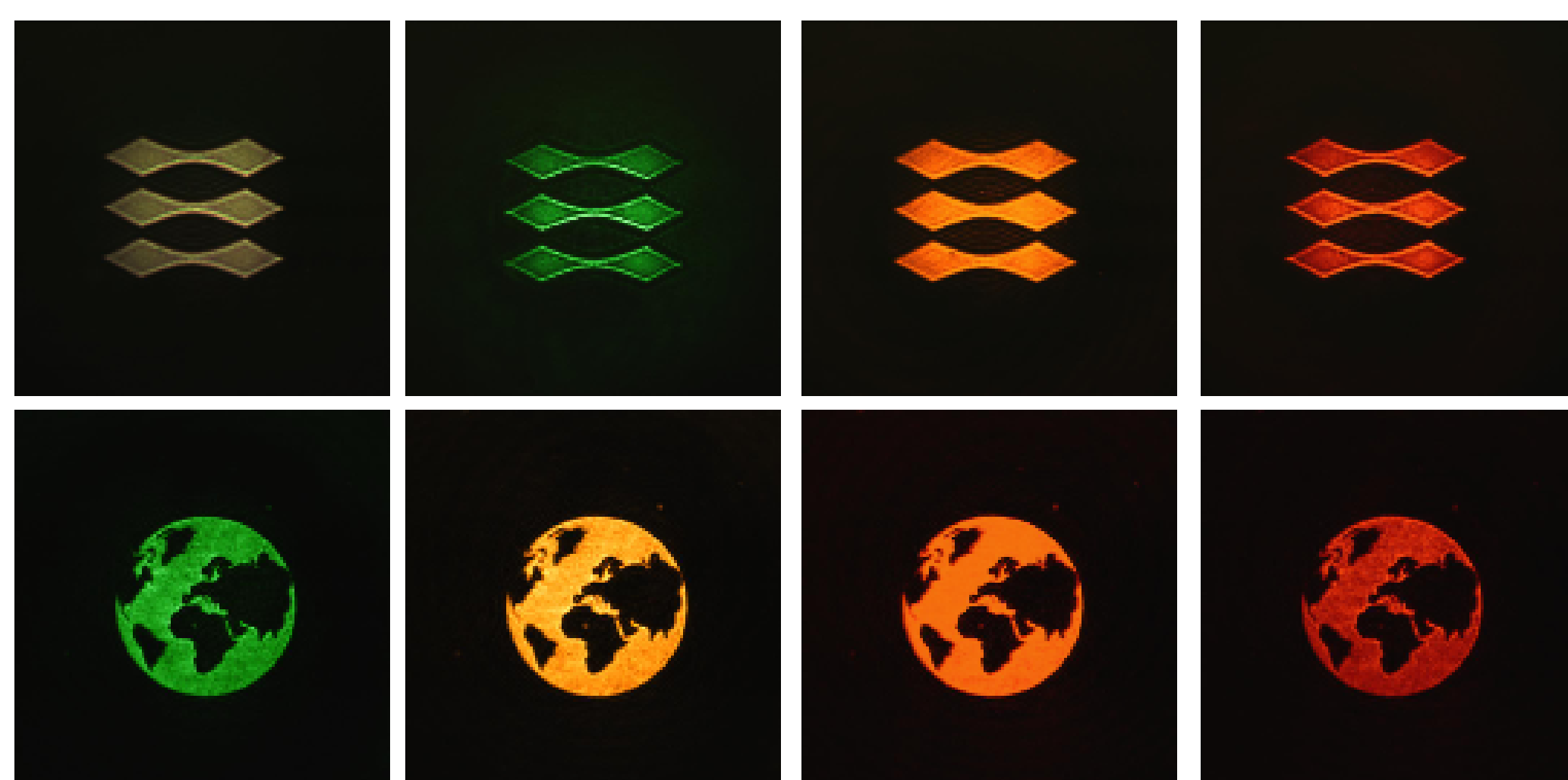


To obtain a uniformly illuminated rectangle with 84W, up to 216W is normally blocked. GPC, on the other hand can use 84W out of 100W, saving 200W (93%)

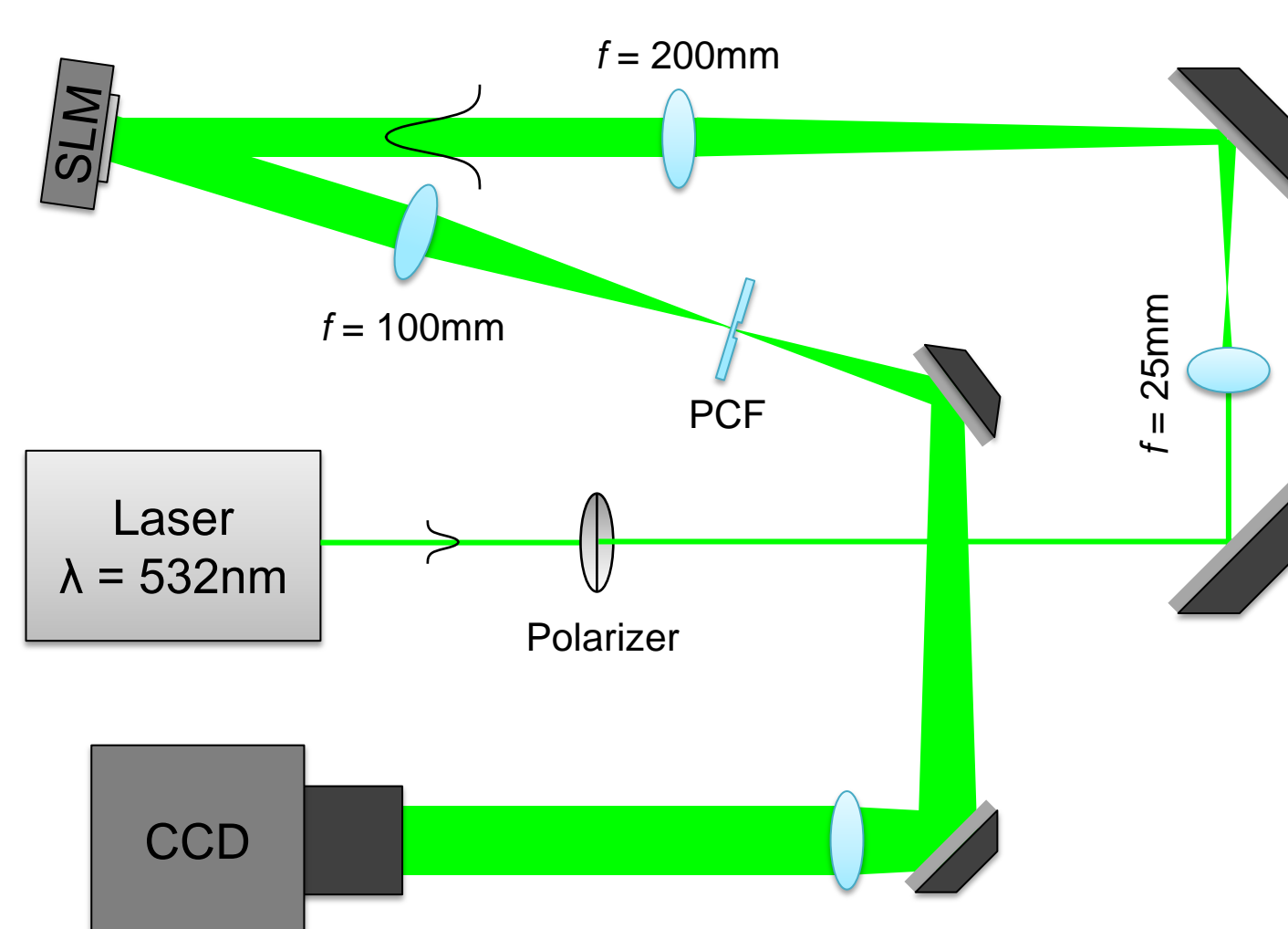
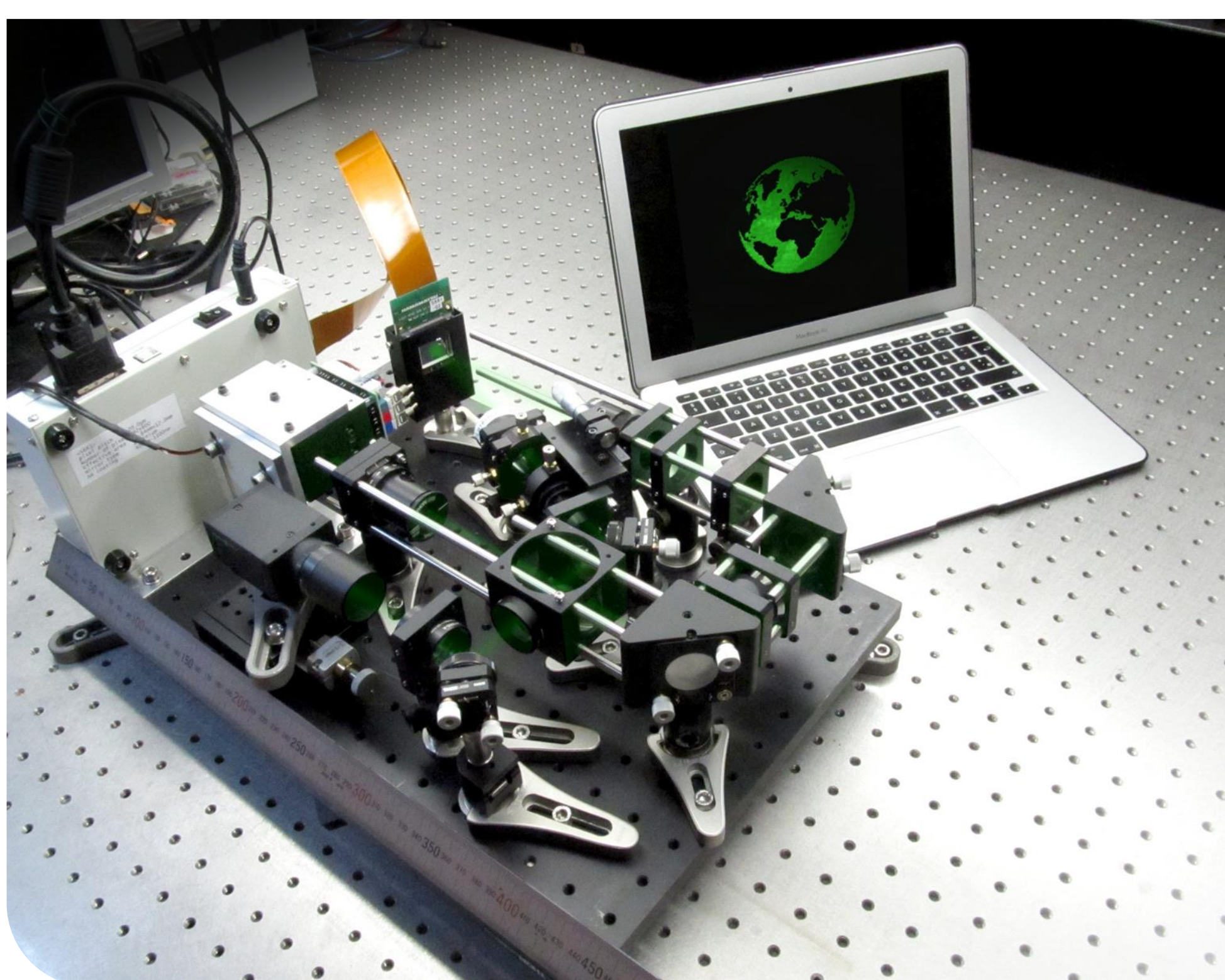
Typical illumination shape requirements

- Circle: maximizes light through objective's back aperture
- Rectangle: maximizes SLM utilization

Multi-spectral light shaping using a SuperK™

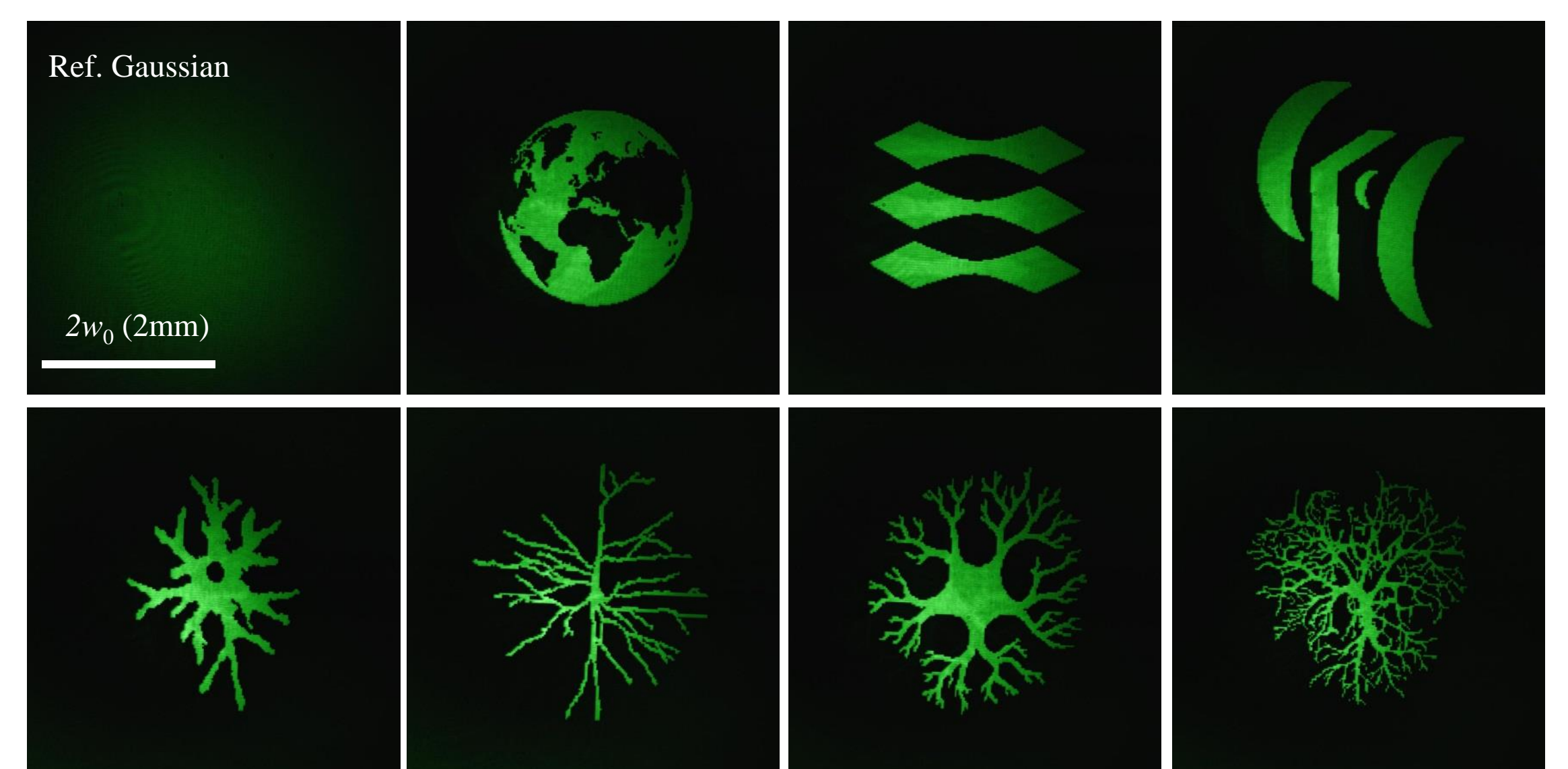


Dynamic light shaping for biophotonics applications



Features

- Real time/low overhead light re-programmability
- Contiguous extended patterns
- Speckle & noise free



Applications

- Neurophotonics & optogenetics
- Materials processing
- Optical trapping and manipulation

References

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Websites

- www.ppo.dk
- www.GPCphotonics.com

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Acknowledgements & Collaborations

